Just the Facts About ...

Summer Cooling Tips

Energy Wise Homes

Energy Use

During the summer, well over half of your total energy costs are spent cooling your home. The fossil fuels used to generate electricity to provide air conditioning contribute to air quality and health problems in our region, and add greenhouse gasses to the atmosphere which cause global climate change. *You can make a difference.* Taking a few simple steps to save energy while cooling your home can save you big bucks and help protect the environment.

The obvious enemies of summer cooling are heat and humidity. Keep outside heat from entering your home, and avoid creating unwanted heat within your home. Reducing humidity makes your home feel cooler and more comfortable. Moving air feels cooler than still air, so creating a slight breeze can reduce air conditioning needs.

Air Conditioning

Set your thermostat no cooler than 78 degrees while you are at home, and no cooler than 85 degrees when you are away for more than a few hours. To help you remember to reset the thermostat when you leave the house, attach a hook to the wall next to the thermostat to hang your keys on. You'll not only save money on cooling costs, but you'll always be able to find your keys!

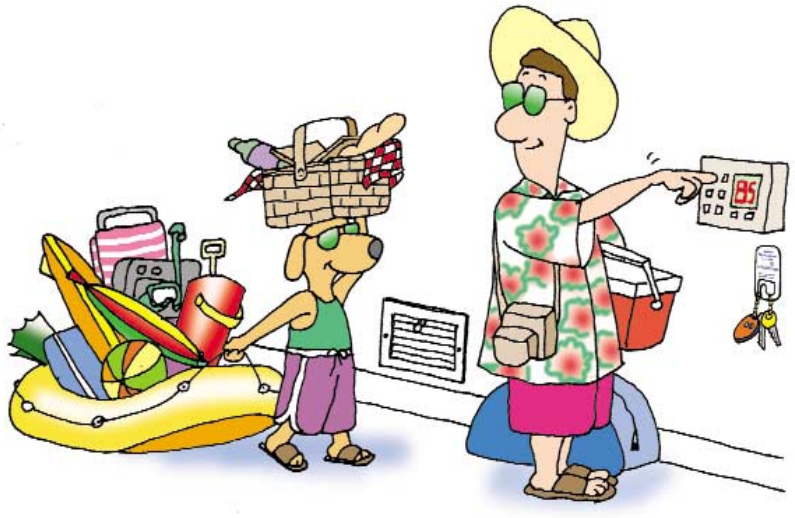
It is a myth that it is cheaper to keep a house cool all the time than to cool a house that has had the air conditioner turned off or set to a warmer setting for part of the day. It actually takes less energy to run an air conditioner hard for a short time than to run it over a long period of time. If you have a programmable thermostat, set the air conditioning to reach a comfortable temperature right about the time you usually arrive at home.

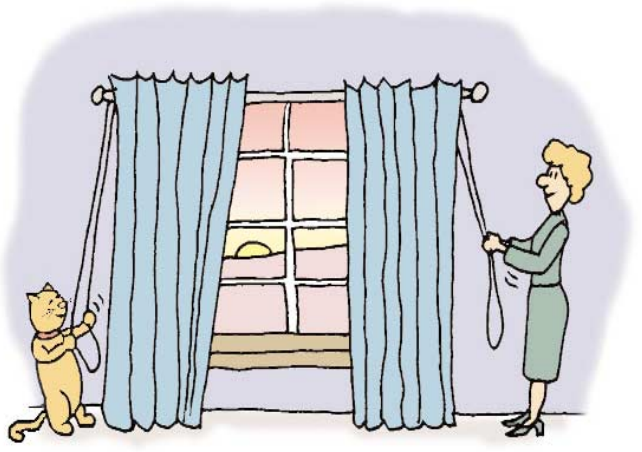
It is also a myth that your house will cool down faster if you set the thermostat to a cooler than normal setting. It takes just as long, and there is a good chance that you will forget to reset the thermostat. It is better to set the thermostat to the desired temperature and leave it alone until you leave the house again.

If your house feels chilly, or you need a warm blanket on a summer night, you are overcooling your home and wasting money. Consistently overcooling your home might also reduce your body's natural ability to acclimate, or adjust to warmer temperatures. It is best to be comfortable, but not cold.

If you have central air conditioning, and one part of your home is always cooler than another, it is helpful to set the fan setting to "on" during the hours when you are at home This circulates air through your house and evens out the temperature without using much more energy.

Window units (or room air conditioners) circulate air best when the fan setting is on "high." However, they do a better job of removing humidity from the air when the fan is on a "low" setting. Therefore, on hot humid days it is often best to put the air conditioning unit's fan





on "low" and run a separate small fan in the room near the air conditioner to help circulate the cool air.

Maintenance is important no matter what kind of air conditioner you have. Make sure that window units are installed on flat level surfaces and that drainage is functioning properly. Clogged drainage hoses can prevent the unit from removing humidity from the air, and can result in leakage, moisture problems, or equipment failure. Make sure to clean or change filters regularly on window and central units to ensure efficient operation and adequate air flow.

Many people don't realize that air conditioners need shade to operate most efficiently. Sunlight on an air conditioner's outdoor heat exchanger warms it up and makes it work harder to expel excess heat. Plant trees, shrubs, or a trellis near the outside unit of a central air conditioner to provide shade, but make sure to leave adequate space for air circulation. Never allow vegetation to grow on or against the unit itself. If you have a window unit, install it in such a way that the outside portion is in a shady location. If you don't have trees or bushes to provide shade, install the unit in a window on the north side of your house.

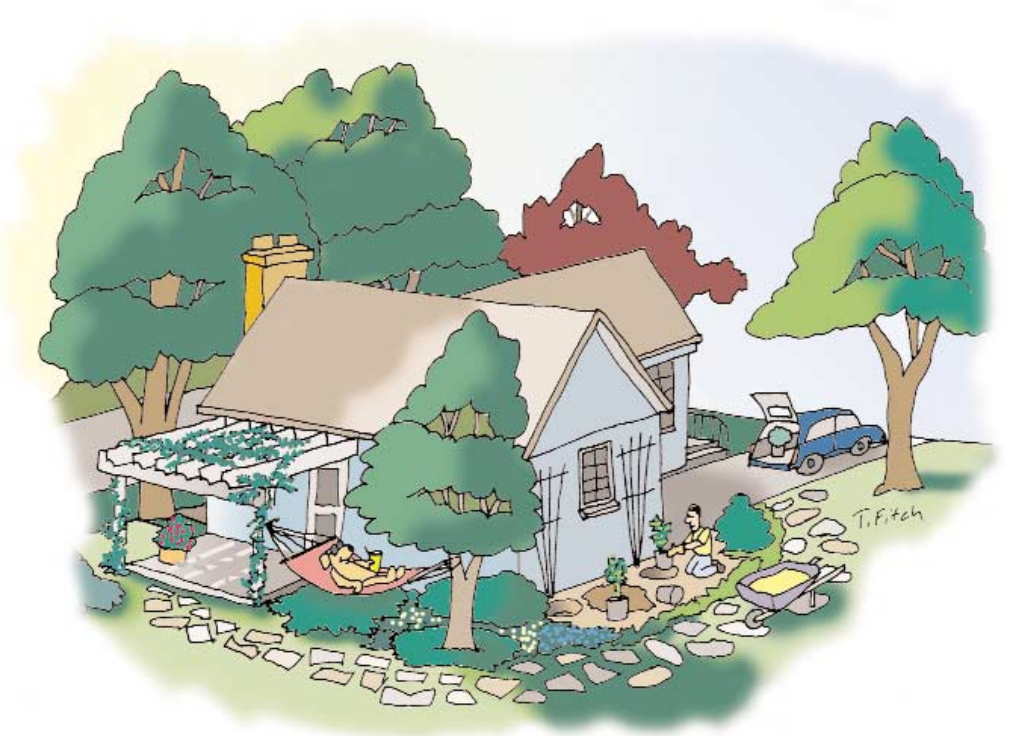
Keep the Heat Out

Sunny windows let the heat in. It is a good idea to close shades or drapes during the day to keep sunlight out. It is even better to shade windows on the outside, particularly on the south and west sides of your house. Awnings, deciduous trees, or vines grown on trellises can all do a great job of providing cool shade.

Not all heat comes down directly from the sun. Some is reflected up off patios, sidewalks and streets. Shrubs planted between paved surfaces and windows help to block this reflected heat and keep it from entering your home.

The same leaks and cracks that let cold drafts in during the winter allow heat to enter your home during the summer. Check windows and doors to make sure they have good caulking and weatherstripping. Make sure that window air conditioners are mounted correctly and that the seals are tight against the window frame. Light switches and outlets can let outside air in through spaces between the electrical box and the wall. These can easily be sealed with inexpensive foam gaskets sold for this purpose.

A well-insulated attic keeps heat from the roof from getting into your house. A minimum of R-30 insulation is recommended in our area. Radiant barriers installed inside the roof also help. In



addition, there are roof coatings available that are light colored and reflect more heat away from the home than a dark roof surface. A lighter, more reflective roof also helps reduce the stifling effects of "urban heat islands" and has a positive effect on local air quality. Large shade trees provide a similar benefit, and if they are deciduous (losing their leaves in the winter), they also help your home stay warm in cold months by letting sunlight through their bare branches.

Unintentional Heating

Many of the appliances you use on a daily basis add unwanted heat to your home. Your oven is possibly the biggest culprit. Try to avoid baking or broiling on hot days. Use your stovetop to cook meals that can be quickly heated, and keep lids on the pots to hold the heat in. Also make sure you use the smallest burner possible to match the size of your pot. Make sure to run your kitchen exhaust fan while you are cooking, and for up to a half-hour afterward, to remove as much of the heat from your home as possible. The best way to cook in the summer is with a microwave oven. Microwave ovens use far less energy to cook your food, and produce very little unwanted heat. And, of course, the smartest thing to do on hot days is to eat cold foods that don't require heating, like sandwiches, salads, fruits, cheeses, pates and chilled soups.

Doing laundry can add unwanted heat and humidity to your home. Use cold water to wash clothes whenever possible, and hang them outside to dry. If you need to run your dryer, do it for as short a period of time as possible. Make sure the dryer is vented to the outside of your home and that the vent is properly sealed. Consider doing laundry after dark, when the temperature is cooler and the effect on your energy bill will be less.

Light bulbs also generate heat. Incandescent bulbs burn hot, and halogen lights are even hotter. This excess heat causes your air conditioner to work harder, using more electricity. Energy-efficient compact fluorescent bulbs not only use much less energy themselves, but also reduce the energy use of your air conditioner because they produce very little heat.

Other appliances also generate heat. Televisions and lamps should never be located near a thermostat. Turn off or unplug any appliance that you are not using. A lot of small electronic appliances use electricity even when they are turned off, such as VCRs, answering machines, stereos and electric toothbrushes. It is easier to plug some of these appliances into a surge protector that can easily be turned off, than to unplug each one when you're not using it.

Refrigerators and freezers actually heat your house while they chill your food. By making sure that these appliances are operating efficiently, you can reduce the amount of heat that they generate. It is best to keep the temperature of your refrigerator set to between 37 and 40 degrees F. Test the temperature by putting a thermometer in a glass of water and leaving it in the fridge overnight. The freezer should be kept at about five degrees F. You can test the freezer temperature by leaving a thermometer between frozen food packages overnight.

Make sure to defrost your freezer before ice builds up. Ice actually insulates the unit and makes it work harder to get the coolness to the food. Also, a full refrigerator is more efficient than an empty one. If you have a lot of empty shelf space, fill it with containers of water to hold the cold. Check all the seals on your refrigerator and freezer to make sure they are air-tight. Also make sure there is sufficient space between the back of the unit and the wall to allow for air circulation. Most important of all, keep the doors closed. Encourage children and family members to decide what item they want BEFORE they open the refrigerator door.

Humidity

Dryer air feels cooler, so reducing humidity in your home can greatly increase your comfort. However, you unintentionally add humidity to your home every time you take a shower or bath, do laundry, run a dishwasher, or boil water. You can minimize the amount of humid air created by operating ceiling exhaust fans in the kitchen and bathroom. Turn the fan on shortly before you begin your shower or start to cook, and leave it running for 15 minutes afterward. This not

only removes most of the moisture, but also takes away the hottest air in the room, which is nearest the ceiling.

Cool Breezes

We all feel cooler if a breeze is blowing. The "wind chill" effect produced by a fan can make a room feel about five degrees colder than it actually is. That's why ceiling fans are so effective at improving the comfort of a home. In the summer, a ceiling fan can create the gentle draft that allows you to set your air conditioning a few degrees warmer without loosing comfort. In the winter, a ceiling fan can be used to direct warm air from the highest part of a room down to where people need it, but in the summer the direction in which the fan blades turn should be reversed to pull cool air up from floor level. Make sure the breeze is blowing in the right direction.

Smaller room fans can accomplish the same effect. Any movement of air helps increase comfort. Oscillating fans are particularly effective because they constantly change direction and can stir the air in a large area.

Cool Investments

When shopping for a new central or window air conditioner, always look for the "ENERGY STAR" label. A properly-sized and installed "ENERGY STAR" central air conditioner uses about 20 percent less electricity than a standard new central air conditioner.

It is a myth that the largest possible air conditioner will work best. Whether using a central air conditioning unit or a window (room) unit, it is better to have a unit that is properly sized than to have one that is too big for the job. A unit that is too large will start and stop frequently and run for fairly short periods of time. Air conditioners are most efficient, and remover humidity from the air most effectively, when they run for longer periods of time. Therefore, smaller units often provide greater comfort and maintain a constant temperature better than larger units.

In order to maximize the efficient use of your air conditioner, consider purchasing a programmable thermostat. The cost of these has come down in recent years (as low as 40 dollars), while the number of features offered has increased. Many newer models are able to store multiple daily settings, up to four or more temperature settings per day. They also allow you to change one or more of the settings without affecting the rest of the weekly program. It is a good idea to use a thermostat that allows you to use different settings for weekends than weekdays. Some thermostats also sense the outside air temperature, and adjust your air conditioner's turn-on time accordingly.

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